

U.S. SERIAL NO: 07/867, 819
FILED: April 13, 1992
AMENDMENT

APPENDIX: Claims on Appeal

1. A peptide forming a linear epitope for a human autoantibody selected from the group of peptides of less than forty amino acids, wherein the sequence of the epitope begins with the amino acid numbered from the amino terminus followed by the listed amino acid sequence consisting of

the Ro/SSA epitopes: 30, MNRLHRFL (Sequence Listing ID No. 37), 37, LCFGSEGGT (Sequence Listing ID No. 38), 38, CFGSEGGT (amino acids 2-9 of Sequence Listing ID No. 38), 41, SEGGTYIIEQ (Sequence Listing ID No. 39), 42, EGGTYIIEQ (amino acids 2-11 of Sequence Listing ID No. 39), 44, GTYYIIEQ (amino acids 4-11 of Sequence Listing ID No. 39), 44, GTYYI (amino acids 4-8 of Sequence Listing ID No. 39), 76, EIKSFSQEGRT (Sequence Listing ID No. 40), 78, KSFSQEGR (amino acids 3-10 of Sequence Listing ID No. 40), 81, SQEGRTTKQ (Sequence Listing ID No. 41), 84, GRTTKQEP (Sequence Listing ID No. 42), 106, STKQAAFKAV (amino acids 2-11 of Sequence Listing ID No. 43), 105, ISTKQAAFKAVS (Sequence Listing ID No. 43), 108, KQAAFKAV (amino acids 4-11 of Sequence Listing ID No. 43), 111, AFKAVSEVC (Sequence Listing ID No. 44), 126, FTFIQFKDLKESMK (Sequence Listing ID No. 45), 130, QFKKDLKE (amino acids 5-12 of Sequence Listing ID No. 45), 138, SMKCGMWGRA (Sequence Listing ID No. 46), 139, MKCGMWGRA (amino acids 2-10 of Sequence Listing ID No. 46), 142, GMWGRALRKAIA (Sequence Listing ID No. 47), 145, GRALRKAI (amino acids 4-11 of Sequence Listing ID No. 47), 165, ALAVTKYKQRNGWSHKDLLRLSH (Sequence Listing ID No. 48), 169, TKYKQRNG (amino acids 5-12 of Sequence Listing ID No. 48), 173, QRNGWSHK (amino acids 9-16 of Sequence Listing ID No. 48), 182, LLRLSHLKPSS (Sequence Listing ID No. 49), 184, RLSHLKPS (amino acids 3-10 of Sequence Listing ID No. 49), 199, TKYITKGW (amino acids 2-9 of Sequence Listing ID No. 71), 202, ITKGWKEV (amino acids 5-12 of Sequence Listing ID No. 71), 210, HELYKEKA (Sequence Listing ID No. 50), 212, LYKEKALSV (Sequence Listing ID No. 51), 216, KALSVETEKLLKYL (Sequence Listing ID No. 52), 222, TEKLLKYL (amino acids 7-14 of Sequence Listing ID No. 52), 224, KLLKYLEA (Sequence Listing ID No. 53), 229, LEAVEKVKRTKDE (Sequence Listing ID No. 54), 234, KVKRTKDE (amino acids 6-13 of Sequence Listing ID No. 54), 257, HLLTNHLKSKEVWKALLQEMPL (Sequence Listing ID No. 55), 263, LKSKEVWK (amino acids 7-14 of Sequence Listing ID No. 55), 264, KSKEVWKA (amino acids 8-15 of Sequence Listing ID No. 55), 265, SKEVWK (amino acids 9-14 of Sequence Listing ID No. 55), 280, ALLRNLGKMTA (Sequence Listing ID No. 56), 283, RNLGKMT (amino acids 4-10 of Sequence Listing ID No. 56), 285, LGKMTANS (Sequence Listing ID No. 57), 308, LCNEKLLKKARIHPFHI (Sequence Listing ID No. 58), 313, LLKKARI (amino acids 6-12 of Sequence Listing ID No. 58), 315, KKARIHPF (amino acids 8-15 of Sequence Listing ID No. 58), 330, TYKTGHGLRGKLKWRPDE (Sequence Listing ID

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No. 59), 331, YKTGHGL (amino acids 2-8 of Sequence Listing ID No. 59), 352, ALDAAFYK (Sequence Listing ID No. 60), 355, AAFYKTFKTVEPTGKRFLLA (Sequence Listing ID No. 61), 379, ASMNRVLGS (Sequence Listing ID No. 62), 365, EPTGKRFL (amino acids 11-18 of Sequence Listing ID No. 61), 398, AMCMVVTR (Sequence Listing ID No. 63), 414, AFSDEMVP (Sequence Listing ID No. 64), 420, VPCPVTTD (Sequence Listing ID No. 65), 433, VLMAMSQI (Sequence Listing ID No. 66), 445, TDCSLPMI (Sequence Listing ID No. 67), 449, LPMIWAQKTNTTPA (amino acids 3-15 of Sequence Listing ID No. 68), 472, TFAGGVHPAI (Sequence Listing ID No. 69), 472, TFAGGVHP (amino acids 1-8 of Sequence Listing ID No. 69), 481, IALREYRKKMDIPAKL (Sequence Listing ID No. 70), 484, REYRKKMD (amino acids 4-11 of Sequence Listing ID No. 70).

2. A peptide of claim 1 consisting of between four and twenty five amino acids.

3. A peptide of claim 2 reactive with anti-Ro/SSA polyclonal antibodies.

10. A peptide of claim 1 labelled with a compound selected from the group consisting of dyes, fluorescent labels, chemiluminescent labels, enzymes, and radioactive labels.

11. A peptide of claim 1 immobilized onto a substrate.

12. A method for screening patients for autoantibodies to Ro/SSA comprising reacting a biological sample with a peptide forming a linear epitope selected from the group of peptides of less than forty amino acids, beginning with the amino acid numbered from the amino terminus followed by the listed amino acid sequence consisting of

the Ro/SSA epitopes: 30, MNRLHRFL (Sequence Listing ID No. 37), 37, LCFGSEGGT (Sequence Listing ID No. 38), 38, CFGSEGGT (amino acids 2-9 of Sequence Listing ID No. 38), 41, SEGTTYIKEQ (Sequence Listing ID No. 39), 42, EGGTTYIKEQ (amino acids 2-11 of Sequence Listing ID No. 39), 44, GTYYIKEQ (amino acids 4-11 of Sequence Listing ID No. 39), 44, GTYYI (amino acids 4-8 of Sequence Listing ID No. 39), 76, EIKSFSQEGRT (Sequence Listing ID No. 40), 78, KSFSQEGR (amino acids 3-10 of Sequence Listing ID No. 40), 81, SQEGRTTKQ (Sequence Listing ID No. 41), 84, GRTTKQEPM (Sequence Listing ID No. 42), 106, STKQAAFKAV (amino acids 2-11 of Sequence Listing ID No. 43), 105, ISTKQAAFKAVS (Sequence Listing ID No. 43), 108, KQAAFKAV (amino acids 4-11 of Sequence Listing ID No. 43), 111, AFKAVSEVC (Sequence Listing ID No. 44), 126, FTFIQFKKDLKESMK (Sequence Listing ID No. 45), 130, QFKKDLKE (amino acids 5-12 of Sequence Listing ID No. 45), 138, SMKCGMWGRA (Sequence Listing ID No. 46), 139, MKCGMWGRA (amino acids 2-10 of Sequence Listing ID No. 46), 142, GMWGRALRKAIA (Sequence Listing ID No. 47), 145, GRALRKAI (amino acids 4-11 of Sequence Listing ID No. 47), 165, ALAVTKYKQRNGWSHKDLLRLSH (Sequence Listing ID No. 48), 169, TKYKQRNG (amino acids 5-12 of Sequence Listing ID No. 48), 173, QRNGWSHK (amino acids 9-16 of

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Sequence Listing ID No. 48), 182, LLRLSHLKPSS (Sequence Listing ID No. 49), 184, RLSHLKPS (amino acids 3-10 of Sequence Listing ID No. 49), 199, TKYITKGW (amino acids 2-9 of Sequence Listing ID No. 71), 202, ITKGWKEV (amino acids 5-12 of Sequence Listing ID No. 71), 210, HELYKEKA (Sequence Listing ID No. 50), 212, LYKEKALSV (Sequence Listing ID No. 51), 216, KALSVETEKLLKYL (Sequence Listing ID No. 52), 222, TEKLLKYL (amino acids 7-14 of Sequence Listing ID No. 52), 224, KLLKYLEA (Sequence Listing ID No. 53), 229, LEAVEKVKRTKDE (Sequence Listing ID No. 54), 234, KVKRTKDE (amino acids 6-13 of Sequence Listing ID No. 54), 257, HLLTNHLKSKEVWKALLQEMPL (Sequence Listing ID No. 55), 263, LKSKEVWK (amino acids 7-14 of Sequence Listing ID No. 55), 264, KSKEVWKA (amino acids 8-15 of Sequence Listing ID No. 55), 265, SKEVWK (amino acids 9-14 of Sequence Listing ID No. 55), 280 ALLRNLGKMTA (Sequence Listing ID No. 56), 283, RNLGKMT (amino acids 4-10 of Sequence Listing ID No. 56), 285, LGKMTANS (Sequence Listing ID No. 57), 308, LCNEKLLKKARIHPFHI (Sequence Listing ID No. 58), 313, LLKKARI (amino acids 6-12 of Sequence Listing ID No. 58), 315, KKARIHPF (amino acids 8-15 of Sequence Listing ID No. 58), 330, TYKTGHGLRGKWKRPDE (Sequence Listing ID No. 59), 331, YKTGHGL (amino acids 2-8 of Sequence Listing ID No. 59), 352, ALDAAFYK (Sequence Listing ID No. 60), 355, AAFYKTFKTVEPTGKRFLLA (Sequence Listing ID No. 61), 379, ASMNRVLGS (Sequence Listing ID No. 62), 365, EPTGKRFL (amino acids 11-18 of Sequence Listing ID No. 61), 398, AMCMVVTR (Sequence Listing ID No. 63), 414, AFSDEMVP (Sequence Listing ID No. 64), 420, VPCPVTTD (Sequence Listing ID No. 65), 433, VLMAMSQI (Sequence Listing ID No. 66), 445, TDCSLPMI (Sequence Listing ID No. 67), 449, LPMIWAQKTNTPA (amino acids 3-15 of Sequence Listing ID No. 68), 472, TFAGGVHPAI (Sequence Listing ID No. 69), 472, TFAGGVHP (amino acids 1-8 of Sequence Listing ID No. 69), 481, IALREYRKKMDIPAKL (Sequence Listing ID No. 70), 484, REYRKKMD (amino acids 4-11 of Sequence Listing ID No. 70).

13. The method of claim 12 wherein the peptide is labelled with a compound selected from the group consisting of dyes, fluorescent labels, chemiluminescent labels, enzymes, and radioactive labels.

15. The method of claim 14 further comprising detecting autoantibodies in the patient sample.

16. The method of claim 15 further comprising predicting the prognosis of the patient based on the reactivity of the patient sample with the Ro/SSA peptides.